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TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT
(Under 37 CFR 1.97(b) or 1.97(c))

Docket No. #21108
RBC-101US
W
8/21/02

In Re Application Of: **Smith**

Serial No.

10/092,796

Filing Date

March 7, 2002

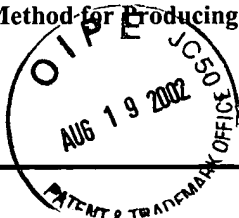
Examiner

Bret Hayes

Group Art Unit

3643

Title: **Method for Producing Miniature Cranberries and a Substantially Full Yield Thereof**



Address to:

**Assistant Commissioner for Patents
Washington, D.C. 20231**

37 CFR 1.97(b)

1. ☒ The Information Disclosure Statement submitted herewith is being filed within three months of the filing of a national application other than a continued prosecution application under 37 CFR 1.53(d); within three months of the date of entry of the national stage as set forth in 37 CFR 1.491 in an international application; before the mailing of a first Office Action on the merits, or before the mailing of a first Office Action after the filing of a request for continued examination under 37 CFR 1.114.

37 CFR 1.97(c)

2. ☐ The Information Disclosure Statement submitted herewith is being filed after the period specified in 37 CFR 1.97(b), provided that the Information Disclosure Statement is filed before the mailing date of a Final Action under 37 CFR 1.113, a Notice of Allowance under 37 CFR 1.311, or an Action that otherwise closes prosecution in the application, and is accompanied by one of:

☐ the statement specified in 37 CFR 1.97(e);

OR

☐ the fee set forth in 37 CFR 1.17(p).

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Method for Producing Miniature Cranberries and a Substantially Full Yield Thereof



Payment of Fee

(Only complete if Applicant elects to pay the fee set forth in 37 CFR 1.17(p))

- ☐ A check in the amount of _____ is attached.
- ☒ The Assistant Commissioner is hereby authorized to charge and credit Deposit Account No. 10-0270 as described below. A duplicate copy of this sheet is enclosed.
- ☐ Charge the amount of _____
- ☒ Credit any overpayment.
- ☒ Charge any additional fee required.

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I certify that this document and fee is being deposited August 15, 2002 with the U.S. Postal Service as first class mail under 37 C.F.R. 1.8 and is addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.

Signature of Person Mailing Correspondence

Chris Wipper

Typed or Printed Name of Person Mailing Certificate

*This certificate may only be used if paying by deposit account.

Signature

James P. Delaney, Reg. No. 45,578

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Racine, WI 53403

262/632-6900

Dated: August 15, 2002

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CC:



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:

Jonathan D. Smith

Attorney Docket No. RBC-101US

Serial No. 10/092,796

Group Art Unit: 3643

Filed: March 7, 2002

Examiner: Not Yet Assigned

Title: Method for producing miniature cranberries and a substantially full yield thereof

* * * * *

245 Main Street, Suite M
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August 15, 2002

Box DD

Assistant Commissioner for Patents
Washington, DC 20231

Dear Sir:

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INFORMATION DISCLOSURE STATEMENT

Attached is a completed information disclosure statement form and a copy of each document listed thereon. The statement is believed to be timely filed pursuant to 37 C.F.R. § 1.97(b)(3) because, as far as the Applicants are aware, the first office action has not yet been mailed.

Consideration of each such document by the Examiner is respectfully requested. Pursuant to section 609 of the Manual of Patent Examining Procedure, the Examiner is requested to return an initialed copy of such PTO-1449 form with the next communication, to indicate that such documents have been considered.

Following are comments with respect to certain of the cited references:

U.S. Patent No. 6,134,829 to Elkind et al. discloses a method of inducing simultaneous ripening of a tomato crop. Elkind et al. does not discuss use of gibberellins, rather it describes the use of auxins to create seedless tomatoes with increased fruit set and size. Elkind et al. does not disclose or teach the Applicant's method of use on cranberry plants, nor the resulting novel yield of cranberries.

U.S. Patent No. 6,114,284 to Fujisawa et al. discloses a plant growth regulator comprising gibberellin and a jasmonic acid ester and deals mainly with the synergistic action of the two components. Fujisawa does not disclose or suggest the Applicant's use of gibberellin to reduce the size of cranberries while increasing cranberry yield.

U.S. Patent No. 5,885,932 to Parr et al. discloses the use of additives to improve the performance of rest-breaking agents. Parr et al. deals with the growth abnormalities resulting from insufficient winter chilling. In such conditions rest-breaking agents, including salts of gibberellic acid, are used to break the rest of fruit trees and plants, including cranberry plants. While Parr et al. discusses both cranberry plants and salt of gibberellic acid, it does not disclose the berry-size reducing effect discovered by Applicant, nor the Applicant's method of use of gibberellic acid or resulting yield of cranberries.

U.S. Patent No. 5,877,400 to Tomes et al. discloses a transgenic method for producing seedless fruits. Tomes et al. discusses the application of gibberellin on watermelons, peppers and grapes to increase fruit set and/or size, but concentrates on the transgenic modification of plants by transforming an angiosperm plant cell with a DNA sequence which encodes a plant hormone

which promotes fruit set and/or development. Tomes et al. does not disclose the Applicant's method of use on cranberry plants, nor the resulting yield of miniature cranberries.

U.S. Patent No. 5,532,206 to Evans et al. discloses a method of applying to a plant C-16,17-dihydro gibberellin which results in dwarfing, i.e., the inhibition of stem elongation (col. 1, lines 15-16); stem, shoot and/or root growth retardation; flowering; improved fruit quality; inhibiting fruit ripening; improving fruit set; controlling weed growth; inducing male sterility; retarded bud break and tillering. Evans et al. does not disclose or suggest the Applicant's claimed method of use on cranberry plants, nor the resulting yield of miniature cranberries.

U.S. Patent No. 5,163,993 to Shafer et al. discloses a composition comprising gibberellin and a surfactant which is used to thin grape clusters and increase grape size and weight. Shafer et al. also discloses that gibberellin is generally used to promote rapid growth and elongation of cells that are still growing or are capable of growth and to increase fructification of fruit trees. Shafer et al. does not disclose the Applicant's use of gibberellin on cranberry plants nor the resulting miniature seedless cranberries.

U.S. Patent Nos. 4,941,908 and 5,085,683 to Pharis et al. disclose the application of a gibberellin to fruit trees to promote the flowering thereof. The Pharis et al. patents further disclose that such application can promote return flowering and prevent biennial bearing. The patents do not discuss any effects on fruit set, fruit size or the yield of fruit.

U.S. Patent No. 5,055,126 to Dathe et al. discloses the use of a composition including gibberellic acid and salicylic acid to increase the yield of soybeans by decreasing the high rate of abscission of flowers and young fruit or by increasing the number of flowers. After application

of the composition, the grain yields and length of the shoots increase. Dathe et al. does not disclose or suggest the Applicant's use of gibberellin, nor does it disclose or suggest the results Applicant attained.

U.S. Patent No. 4,799,950 to Suzuki et al. discloses a plant growth regulating composition which includes gibberellin as an active ingredient. Suzuki et al. states that the composition promotes growth, germination, root formation and thickening growth. Suzuki et al.'s tables demonstrate gibberellin's effect as a promoter of growth. Suzuki et al. does not disclose the Applicant's claimed method of use on cranberry plants, nor does it disclose the resulting yield of miniature cranberries.

U.S. Patent No. 4,507,144 to Aloni discloses a process of increasing the fiber content and crop of plants including applying a combination of a gibberellin and an auxin. Aloni states that gibberellins are known to promote extensive growth of plants, to induce cell elongation of various types of plant cells, including fibers, to increase the amount of fibers in plants, and to promote the growth of dormant buds. Aloni does not disclose or suggest the Applicant's discovered use of gibberellin in reducing cranberry size or increasing yield, or the resulting novel yield of cranberries.

U.S. Patent No. 4,406,687 to Oyamada et al. discloses the use of 1-(hydrocarbylcarbamoyl)-3-(carboxy or hydrocarbyloxycarbonyl)-isoureas and isothiureas and the lactams of the 3-carboxy compounds in association with a gibberellin (which may be naturally present in a plant) as plant growth regulators. Oyamada et al. discusses the known uses

of gibberellin in plant growth regulation, but does not disclose or suggest the Applicant's use of gibberellin which results in yields of miniature cranberries.

U.S. Patent Nos. 3,879,188, 4,374,661 and 4,401,454 to Fritz et al. disclose a plant growth regulation method which utilizes phosphonic acid compounds. The patents mention that phosphonic acid derivatives may be used in conjunction with other plant growth regulators, such as gibberellic acid. The Fritz et al. patents also discuss gibberellic acid's effect on cucumbers in Example 40 and state that gibberellic acid is known to stimulate male sex expression and stimulate vegetative growth. In Example 71, the patents demonstrate that the application of gibberellic acid in combination with 2-chloroethylphosphonic acid is effective in reducing the chilling requirement of peaches. In Example 91 the patents state that freeze resistance of fruit buds following 2-chloroethylphosphonic acid sprays in combination with gibberellic acid increased 23%. Example 93 shows that gibberellic acid treatment is effective for reducing internal browning and increasing fruit size but delays harvest maturity. The combination of 2-chloroethylphosphonic acid and gibberellic acid reduced internal browning, increased fruit color and soluble solids, increased fruit size and increased the percent of ripe fruit 4 days after treatment without reducing fruit firmness. These patents do not disclose or suggest the Applicant's claimed use of gibberellic acid on cranberry plants or the novel yield of cranberries resulting therefrom.

U.S. Patent No. 4,361,436 to McCarthy et al. discloses a composition including N-heterocyclic monoamide which is used for the treatment of plants to achieve enhanced plant growth regulatory effects. Gibberellic acid is mentioned as an agricultural agent which could be

employed in a mixture with McCarthy et al.'s composition. Table XXX includes data supporting the increase in fruit growth after application of gibberellic acid to Bing cherry trees. This patent does not address either the specific use of gibberellin or the ability to reduce fruit weight of cranberries.

U.S. Patent No. 4,342,585 to Motomuro et al. discloses a method for obtaining fruits, particularly grapes, having good flavor and taste. The disclosure deals mainly with the application of cyclic-3'5'-adenylic acid and/or its derivative to the fruit-bearing flower or the fruit of a grape plant. Tables 1, 3 and 8 include data concerning the application of gibberellin to grape plants, but the patent neither discloses or suggests the Applicant's method or unique cranberry yield.

U.S. Patent No. 4,242,120 to Manankov discloses a method of applying a preparation including gibberellin to young shoot portions near a plants reproductive organs during the period of active fructification to enhance productivity of the plant. Manankov demonstrates that the effective application of gibberellin to grape plants results in increased size of grapes. Manankov does not disclose or suggest the Applicant's method of application to cranberry plants or the resulting decreased size of berries.

U.S. Patent No. 4,050,919 to Motomuro et al. discloses a method for developing seedless fleshy berry of grapes through application of a composition containing cyclic-3'5'-adenylic acid and gibberellin. It discloses the use of gibberellin to retard the formation of seed and stimulate growth of fruit in grape plants. This disclosure teaches away from the Applicant's use of gibberellin to retard the growth of cranberries.

U.S. Patent No. 3,679,392 to Strauss et al. discloses the use of glycolic acid to enhance the performance of gibberellic acid. Strauss et al. states that gibberellic acid is used to stimulate growth and provides tables of data showing that plant growth is increased when gibberellic acid is used in conjunction with glycolic acid. Such increased growth is due to glycolic acid's role in opening stomata on a plant's foliage to facilitate uptake of the gibberellic acid. Strauss et al. does not disclose or suggest the Applicant's claimed method or the resulting novel yields of cranberries.

U.S. Patent No. 2,842,051 to Brian et al. first discloses a method of producing gibberellic acid and its use in promoting plant growth. Brian et al. demonstrates that gibberellic acid can be used to increase height and weight of wheat shoots, pea shoots and grass crops. Brian et al. does not discuss gibberellic acids effects on fruits and does not disclose or suggest the Applicant's method or resulting yield of cranberries.

The article entitled "Plant Growth Regulators Alter Fruit Set and Yield in Cranberry (*Vaccinium Macrocarpon* AIT)" (*Acta Horticulture 241: IV International Symposium on Vaccinium Culture*. 1989. Strang, Elden J., and Brian A. Birrenkott) discloses the application of plant growth regulators, including gibberellic acid, to 'Searles' cranberries. The study found that fruit set of 51-53% could be achieved while mean berry weight was slightly reduced. Table 1 shows that application of a composition including GA3 resulted in a mean fruit weight of 0.47g, with 9 fruits having a weight of 0.5g, 27 fruits having a weight of between 0.6g and 1.0g, and 2 fruits having a weight of more than 1.0g. Application of a composition including GA4+7 resulted in a mean fruit weight of 0.53g, with 7 fruits having a weight of 0.5g, 28 fruits having a

weight of between 0.6g and 1.0g, and 5 fruits having a weight of more than 1.0g. The article does not disclose or suggest the Applicant's method of treating cranberry plants, nor the resulting yield of miniature cranberries.

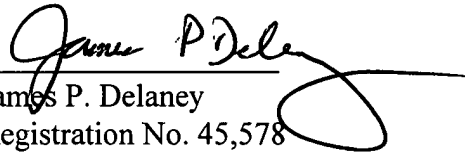
The article entitled "Cranberry Fruit Set: Problems and Potentials" by Elden J. Stang and found at www.library.wisc.edu/guides/agnic/cranberry/proceedings/1990/crasta.pdf discusses the efforts of the author to increase fruit set in cranberry plants. Stang refers to the study detailed in the article entitled "Plant Growth Regulators Alter Fruit Set and Yield in Cranberry (*Vaccinium Macrocarpon* AIT)" and states that application of plant growth regulators resulted in fruits which "did not develop to normal size." The article does not disclose or suggest the Applicant's method of treating cranberry plants, nor the resulting yield of miniature cranberries.

The article entitled "Endogenous Gibberellin-like Activity in Cranberry at Different Stages of Development as Influenced by Nitrogen and Daminozide" (*J.Amer.Soc.Jort.Sci.* 103(2):250-252. 1978. Luke, Nai-Chia and Paul Eck) discusses the effect of nitrogen and daminozide on gibberellic activity in leaves, runners and uprights of "Early Black" cranberry plants. The study finds that application of nitrogen increases endogenous gibberellic acid activity in runners and uprights. The article also states that less than 30% of cranberry flowers normally set fruit. The article does not disclose the Applicant's method of treating cranberry plants to provide reduced berry size, increased fruit set or the resulting yield of miniature cranberries.

This submission is not a representation that any such document is prior art to this application; the right to establish otherwise, pursuant to 37 CFR 1.131 or otherwise, is reserved.

The listed documents are not represented to be material to the examination of this application; such documents are cited, however, to make it clear beyond any doubt that there has been compliance with the Duty of Disclosure. We do not concede each item cited is relevant but the items are cited to show the general background of the art.

Respectfully submitted,

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